

## REMARKS

This application has been carefully reconsidered in view of the Office Action of April 4, 2006. By this amendment, claim 3 has been amended to correctly designate MI<sub>2</sub>, claims 9 – 12 have been cancelled and new claims 13 – 17 have been added. Support for the subject matter of claims 13 – 17 is found in applicants' specification at paragraphs 16 and 19. Specifically, with respect to the subject matter of claim 13, attention is invited to the last sentence of paragraph 16 which points out the enhancement in optical properties as achieved by the claimed relationship between the melt indices of the first and second polyethylene resins. With respect to claims 14 – 17, attention is respectfully invited to the first two sentences of paragraph 19.

The rejection of claims 1 – 8 is anticipated by or obvious in view of Patent No. 6,566,450 to Debras et al. is respectfully traversed. With respect to this rejection, it is noted that this patent is not available to establish obviousness under 35 USC 103 in view of the provisions of subparagraph (c) of §103 and in view of the common assignment of this application and the Debras patent. Nevertheless, since the cited reference is a division of an earlier issued patent, the rejection under §102 or alternatively §103 will be addressed in terms of the application of the disclosure in the reference to the claims presented here.

As disclosed in applicants' specification, the process claimed here is effective in the preparation of a blended polyethylene resin having improved optical properties of enhanced transparency and gloss and reduced haze. The patent to Debras et al. is not concerned with these characteristics but instead is directed to the process for the preparation of a pipe resin in which these optical properties are of no significance.

As appears to be acknowledged in the Office Action, the Debras reference fails to disclose the claimed process of physically blending together a first metallocene produced linear

low density polyethylene with a second polyethylene resin prepared by a Ziegler Natta or a metallocene based catalyst system having the recited combination of density and melt index characteristic of the first and second resins to produce a physical blend of the resins to form a polyethylene resin having a density of .935 to .960 g/cm<sup>3</sup> and a melt index of MI2 within the range of 0.2 – 0.9 dg/min. In regard to this rejection and the comments found at the top of page 4 of the Office Action, it is noted that the recited melt indices in terms of decigrams per minute are equivalent to melt indices characterized in terms of grams per 10 minutes. It also will be noted that the melt indices set forth in the claims are in terms of the melt index MI2 whereas the Debras patent, with the exception noted below, presents melt flow data in terms of the high load melt index, HLMI. As will be understood by those skilled in the art, these are two very different melt indices and cannot be made equivalent as was apparently done in the Office Action. The single exception to the foregoing in which a value for the melt index MI2 is given is found in the example 2, column 12, of Debras et al. Here, the reference discloses a blend having a melt index MI2 of 0.2 g/10 min with a density of the polyethylene resin blend of 0.925 g/ml, well below the minimum value of .935 g/ml called for in applicants' claim 1.

With respect to the position in the Office Action that Debras does not disclose a density for the second polyethylene resin, applicants would respectfully disagree. In this regard, attention is invited to lines 40-45, column 5, of Debras which discloses two densities for the second polyethylene, the first is 0.925 g/ml in combination for the same density for the first polyethylene and the other is a density of 0.930 g/ml in combination with a density for the first polyethylene of 0.905 g/ml. It is evident that the density relationships disclosed do not fall within the density ranges set forth in applicants' independent claim 1 and there would be no

reason for one skilled in the art to attempt to modify the Debras reference in a manner contrary to its teachings.

To the extent the reference in the Office Action to *In re Fitzgerald*, 205 USPQ 594, implies an alleged inherency in the Debras reference of the melt index and density characteristics set forth in applicants' claims, applicants would respectfully disagree. The requirements for a rejection based on an alleged inherency are set forth in MPEP §2112.

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish inherency of the result or characteristic. (Emphasis added).

Section 2112 reflects the general rule that for inherency to reside, it must be shown that the alleged inherency is necessarily present and not a mere possibility. Thus, as stated by the Board in *Ex part Keith*, 154 USPQ 321 (Bd. of App. 1966), in reversing the Examiner's rejection based upon inherency:

There are other possible courses the reaction could follow . . .  
Asserted inherency must be a necessary result and not merely a possible result.

As indicated in Section 2112, this principle was more recently followed by the Board in *Ex parte Levy*, 17 USPQ2d 1461 (Bd. of App. and Interf. 1990), where the Board reversed an inherency rejection, stating as follows:

In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the alleged inherent characteristic necessarily flows from the teachings of the prior art (citing cases). (Emphasis original).

Section 2112 also states the circumstances under which the burden shifts to the applicant. This is reflected by cases such as *In re Best*, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980), which are also referred to in MPEP Section 2112. The *Best* and

*Fitzgerald* decisions stand for the rationale that where there is a reasonable assertion of inherency under Section 102 which can be resolved by testing, the burden then falls upon the applicant to come forth with evidence to establish that the prior art does not inherently possess the characteristics of the claimed subject matter.

In the present case, there is no reasonable basis on which to infer inherency in the first instance. The patent to Debras does not disclose the combination of melt indices and densities as claimed of the polyethylene components or the blend of the components. The subject of the relationship of these polymer characteristics and their relationship to optical properties is not even mentioned in Debras. Clearly there is no suggestion in Debras of the improvement in resin properties in terms of enhanced optical properties, as achieved with the resin produced by the process of applicants' invention.

In addition to the foregoing considerations which are applicable to all the claims, it is noted that claims 2, 3 and 13 – 17 recite further characteristics of applicants' method which are not disclosed in or obvious in view of Debras et al. Specifically claim 2 calls for the first low density linear low density polyethylene to have a density of no more than  $0.935 \text{ g/cm}^3$  and claim 3 calls for this polymer component to have a melt flow index  $\text{MI}_2$  within the range of 0.5 – 5 dg/min. These characteristics are not found in the prior art reference.

Claim 13 calls for the first resin to have a melt index  $\text{MI}_2$  which is greater than the melt index  $\text{MI}_2$  of the second resin. With regard to the HLME actually disclosed in the reference, the exact opposite relationship is present and this presumably would indicate a corresponding relationship for the  $\text{MI}_2$  values. Any attempt to modify the Debras reference to arrive at the claimed relationship would clearly be directly contrary to the teachings of the reference. In addition it will be noted that the density characteristics set forth in claims 14 and 15 and the melt

index characteristics set forth in claims 16 and 17 are not disclosed in or obvious from the reference.

The rejection of claims 1 – 8 as unpatentable over U.S Patent No. 6,355,741 to Marechal is respectfully traversed. As the Office Action appears to acknowledge, this reference clearly does not disclose a polyethylene blend having the melt index and density characteristics called for in applicants' claims. Further, the reference does not disclose the melt indices of the two polyethylene fractions involved as recited in the claims. In fact, the subject of the melt index MI<sub>2</sub> of any polymer or blend of polymers is not even addressed in the reference.

In regard to the comments in the Office Action, applicants would respectfully submit that the issue under 35 USC 103 is one of obviousness of the claimed subject matter to one of ordinary skill in the art and not whether the blend of the polyethylene fractions in Marechal "can have" the properties called for in the present claims. In this respect, the Examiner's attention is respectfully invited to MPEP §2143 which establishes three criteria which must be met in order to establish a *prima facie* case of obviousness. As stated in MPEP §2143:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The Examiner's attention is also invited to MPEP §2143.01 and the standards established there under subsections I, II and III. As stated in subsection III:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (emphasis original).

Clearly the rationale offered in the Office Action that the blend of polyethylene fractions in Marechal “can have the properties specified in the present claims...” does not establish obviousness under 35 USC 103 under the protocol called for in the MPEP.

For the reasons advanced above, it is respectfully submitted that all of the claims herein are patentable over the prior art. Accordingly, an early reconsideration and allowance of this application is respectfully requested.

Respectfully submitted,



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July 5, 2006

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